HOMEWORK 3: MODEL BUILD Farm2U: Model Build Background This week in class, we took our first (major) step into the world of financial modeling. We learned to translate the basic unit economics and operating structure of a business into a tunable financial model in Excel. Even with this relatively simple level of exposure to the field, we now possess a powerful framework to break down businesses into simple variables, equations, and reports. Your Task In this assignment, you'll be placed in the role of the financial advisor at a startup incubator. In your new role, you will be helping an early-stage business translate their business concept into a testable financial model through which you can help them determine the overall profitability and viability of their operating assumptions. The company you've been assigned to support is called Farm2U. Founded by two brothers with agricultural roots, Farm2U aims to help local farmers across the country benefit from the direct-to-consumer subscription trend that has emerged in other fields. Farm2U sells fruit and vegetable subscriptions to consumers. Consumers pay a one-time fee to become a member of the Farm2U network. They then pay an upfront subscription fee which covers a set number of produce boxes that will be delivered monthly over a three-year period. Consumers benefit from low-cost, high-quality produce, and farmers benefit from upfront cash for produce to be delivered in the future. Part I: Unit Economics As a first step, open a blank Excel spreadsheet and create a first tab titled: "Unit Economic Model". Using the information provided by the team in the following bullets, construct a tunable unit economic model for the Farm2U team. Information from the founders: · Our model is a relatively simple one. We make money in two ways. Upfront, our consumers pay $250 to become members of the Farm2U network. Upon sign-up, members agree to pre-pay for a set number of boxes over a three-year period. The more boxes they sign up for upfront, the better the price per box. Based on our historic data, on average, customers sign up for 48 boxes, which comes out to a price per box of $65.00. · Our expenses are split into three major categories: Production, Delivery, and Marketing. · We pay roughly $10 per box to farmers to cover their labor in working with us, $15 per box to pay for their products, and $5 on packaging per box. · We spend about $15 per box on delivery labor and another $10 per box on shipping. · We are big on advertising and use a mix of social media channels and radio. We'd estimate that we are paying about $500 on ads to acquire 1 subscriber. Your unit economic model should capture the above inputs before producing gross margin calculations and expenses as a percentage of revenue. Part II: Unit Revenue and Expense Schedule Next, create a revenue schedule that spans a three-year period starting from the coming month. Then use the information provided by the founders in the next bullet to model your unit revenue and unit expense schedule. Information from the founders: · We are pre-launch, but we've already signed 50 subscribers that will begin from the moment we go live. After we've gone live, we believe we can grow at a month-over-month rate of 10% in terms of new member sign-ups. Your unit revenue and expense schedule should respond to changes made on your unit economic model, as well as to changes made to the growth assumptions. Part III: OpEx and Payroll Schedule Next, create a revenue schedule that spans a three-year period and starts with the coming month. Then use the information provided by the founders in the following bullet to model the company's operating expenses and payroll. Information from the founders: · Our company's non-COGS-related expenses are exceedingly light. We will operate out of a small facility for which we pay $30k per year. We estimate needing to have about five employees in total. Our first full-time employee will have an annual salary of $55k and begin work on the first day of the company's formation. We plan on adding a second employee with an annual salary of $45k two months later and a third employee with a salary of $65k seven months after that. We also plan on hiring two part-time employees who will work for us between month 10 and month 15 and month 22 and 27. The first part-time employee will be paid the annual equivalent of $11k and the second an annual equivalent of $15k. Your OpEx schedule should combine OpEx and payroll into a single tab and use the same time span as your revenue and expense schedule. Part IV: Burn down Schedule Next, produce for the founders a burn down schedule that combines the revenue, unit expenses, and operating expenses into a single sheet. Assume the company is seeded with an initial investment of $500k at the company's launch. Your burn down should include a row that tracks monthly cash flow and a second row that tracks the company's remaining balance. Part V: Annual Summary Produce a table that summarizes the company's growth projections on an annual basis. The table should summarize the number of new member sign-ups, total revenue, total expenses, operating margin, margin (%), as well as the annual growth in revenue and profit. On the same tab, produce three graphs that show annual numbers for new member sign-ups, revenue, and profit over the next three years. Part VI: Analyst Recommendations Finally, produce a short, 250-word report that summarizes your findings on the business. Your report should at least answer the following questions: · Is this a viable business concept? · Is this a business whose unit and operating expenses can be covered by its profits? Reference data from your model in your final summary. Considerations and Helpful Hints · Review the rubric to see how this assignment will be graded. · As an extra challenge (and a bit of practice), start this exercise from a blank spreadsheet—and reference work completed in class to help guide you through this process. Avoid simply modifying the in-class examples. · Take special care at the onset of this assignment to ensure your unit economic model is built around a consistent "unit" for both revenue and expenses. RUBRIC: 1. Completeness = Addresses tasks completely, thoughtfully, and rigorously 2. Accuracy of Results = Solves problems accurately; if solution differs from model solution, approach is well-reasoned 3. Insightfulness of Analysis = Shows clear insight into context and goals of assignment and spotlights interesting observations or concisely summarizes key takeaways in analysis 4. Clarity and Polish = Submission is professional, neat, well-organized, easy to read, and would be well-received by senior leadership